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W. ROBERT MOORE

A CUSTOMER EXAMINES A PALM-LEAF PUBLICATION AT A PNOMPENH BOOKSTALL

The narrow strip he holds is printed with Buddhist scriptures. Other shops display rubber balls and clothing. At noon all vendors move across the street following the shade. Pnompenh is the capital of Cambodia, one of the three states which now make up Indochina (Bulletin No. 1).

Bulletin No. 1, October 16, 1950

Rugged Ground Hampers French in Indochina

EMBATTLED French forces in Indochina, now due for stepped-up aid from the United States, have been fighting two enemies for nearly five years. One foe is the communist-led native faction; the other is the rugged terrain over which the struggle has see-sawed.

More than half of all Indochina is mountainous, a maze of lofty ridges, high plateaus, and hidden canyons. Such terrain is made-to-order for the guerrilla-type warfare conducted by the rebels against the French-sponsored government.

Mountain Range Splits Country

The rebels have held large areas of the country from time to time, making guerrilla raids from bases protected by the natural screens of the forested mountains. They have melted away at the approach of the government forces.

So definite are the mountain barriers in Indochina that they dictated many of the boundaries between the various protectorates of the country. The principal range is the Annamese Cordillera, which splits Indochina. A jagged spine, it runs northwest to southeast the length of the country.

To the east, wedged between this rampart and the South China Sea, is the long, narrow, strife-ridden state of Viet Nam. West of the range lies the kingdom of Laos. This is a landlocked and sparsely populated land which borders China and Burma in the northwest. Laos thrusts a scalloped right angle into Siam on the west. The third French protectorate, the kingdom of Cambodia (illustration, cover), is south of Laos. Adding together the areas of these states, which once were five French provinces, gives an area of about 286,000 square miles to Indochina—somewhat more than that of the state of Texas.

Maze of Mountains Separates Indochina from China

Communist efforts have been chiefly directed at the richest and most densely populated of the present three states. Viet Nam has about 22,000,000 people, compared to some 1,500,000 for Laos and approximately 3,500,000 for Cambodia. Viet Nam also contains Indochina's two principal rice-growing areas.

Viet Nam's northern border, together with a small portion of Laos, forms a "back door to China." A mountain range rises between Indochina and China. This chain is a massive series of limestone formations. Steep-walled canyons cut gashes, and sharp spires tower between the peaks.

French troops have been struggling in this northernmost area to subdue the forces of Ho Chi Minh, the rebel leader. It is reported that Chinese communists across the border are helping the rebels with military training, as well as furnishing them with supplies.

Immediately south of this mountain wall is Tonkin, which was once a separate state and is now a part of Viet Nam. It contains the Red River

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W. ROBERT MOORE

CHOSEN BY THE NORTH KOREANS AS THEIR CAPITAL, PYONGYANG WAS THE FIRST SEAT OF THE HERMIT KINGDOM (Bulletin No. 3)

According to tradition, Korea's founder, a Chinese scholar named Kishi (Ki-tze), established his palaces here when he became emperor. Today, Pyongyang (Heijo) is the largest city in Korea north of the 38th parallel. Here boats from farther up the Taedong River have unloaded their cargoes. The craft farthest left is a ferry boat.

Bulletin No. 2, October 16, 1950

Oder and Neisse Rivers Mark Disputed Border

TWO rivers of north central Europe, the Oder and its tributary, the Neisse, have become symbols of one of the world's most explosive problems—the establishment of a permanent German-Polish boundary.

These two rivers form an almost-straight north-south line which marks the western limit of former German territory acquired by Poland at the end of World War II. They are normally important in themselves as arteries of trade and traffic. Less familiar outside Europe than the Danube and Rhine, they came into wide prominence with the provisional border arrangements made at Yalta and Potsdam.

Poland's Westward Movement

Today, the mere mention of the Oder-Neisse line brings to mind a host of complicated questions—geographic, political, and economic—growing more explosive as the east-west division continues and intensifies.

As is geographically shown on a map, the western expansion of Poland —more or less balancing the loss of eastern areas to the Russians—has literally moved an entire nation from 50 to 100 miles westward.

The territory gained between the prewar Polish border and the present Oder-Neisse line amounts to nearly 40,000 square miles. It stretches from the Baltic Sea at the edge of the northern lowlands to the mountain frontier of Czechoslovakia.

Within this broad band of land lies a variety of valuable national assets, including a sea outlet at the port of Szczecin (Stettin, illustration, next page). Fertile farmlands cover the river basins of the middle areas. Industrial cities rise amid the rich coal and other mineral resources of Upper and Lower Silesia.

Industrial Silesia Involved

During the war, the Oder-Neisse area was an important German base of operations. It was from scattered points along its Baltic-to-Czechoslovakia front that the spearheads of the 1939 blitz on Poland were launched.

Industrial Silesia, plus the adjoining Nazi-occupied districts of Poland and Czechoslovakia, was particularly useful to the Germans as a source of military supply. It ranked second only to the vast industrial hub of west Germany's Ruhr. When the Allies opened their bombing offensive against production centers in the west, this "eastern Ruhr" was a relatively safe and remote German stronghold. It continued so until disaster began for Hitler in the east.

Eventually, the tide of war reached and washed over the lands of the Oder and the Neisse. In its wake was left a trail of bombed and battered cities, deserted farms, and disrupted communications.

This destruction, followed by the postwar shift to Polish administration, has resulted in striking and far-reaching changes. Instead of Germans, Poles are now engaged in intensive rebuilding activities in the mining, industrial, and agricultural sections. The whole character of the prewar population, made up of some 7,000,000 Germans and 1,500,000

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delta, one of the world's most fertile rice lands. Hanoi, the capital, stands in the heart of the delta, about 60 miles west of the busy port of Haiphong on the Gulf of Tonkin.

Annam comprises the 720-mile middle strip of Viet Nam territory whose coast forms an S edging the South China Sea. There mile-high mountains rise within 25 to 30 miles of the sea. South of Annam is little Cochin China, with Viet Nam's important city of Saigon, the "little Paris of the Orient," and a sprawling rice-bowl area in the delta of the Mekong.

France controlled all Indochina from 1898 until late in World War II, when the Vichy government turned over various areas to the Japanese. After the war, forces known as the Viet Minh resisted French reoccupation. Now France is trying to hold the principal ports and cities and the rich agricultural areas.

Before the war Indochina produced rubber, coal, iron, zinc, tin, tungsten, and manganese for export. But her two important rice-growing areas, strung as they are at opposite ends of the great Annamite mountain chain, have earned for Indochina the popular description, "two baskets of rice balanced on a pole."

NOTE: Indochina may be located on the National Geographic Society's map of Southeast Asia. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see "Strife-torn Indochina," in the *National Geographic Magazine* for October, 1950; and "By Motor Trail Across French Indo-china," October, 1935; and, in the GEOGRAPHIC SCHOOL BULLETINS, February 27, 1950, "Viet Nam Replaces Three Indochinese States"; and "French Indochina Forms Tropical Crossroads," March 7, 1949.

W. ROBERT MOORE

LOAVES OF FRENCH BREAD GIVE A EUROPEAN TOUCH TO THE MARKET AT CHOLON, "CHINATOWN" ADJOINING SAIGON; PEAKED HATS SHELTER THESE CHINESE FROM SUN AND RAIN ALIKE

Korea Action Geared to Summer Monsoon's End

A KNOWLEDGE of Far Eastern weather helped General MacArthur plan the sweeping actions by United Nations troops which led to the capture of Seoul and the break-through from the Pusan perimeter.

When he ordered the landings at Inchon (map, next page), MacArthur knew that Korea's summer monsoon was on the wane. He could count on an end of the torrential downpours which made mud of most of the war-torn peninsula, created hazards in shipping, and grounded airplanes.

Winter Monsoon Fights for United Nations

In September Korean weather begins its shift to the winter monsoon. By November the change usually is complete, with the weather having improved somewhat from week to week. Gradually the drier condition frees roads and fields from the summer mire. Winter is the dry season when skies generally are clear and visibility excellent.

The winter monsoon already has benefited the United Nations forces more than the communist aggressors. The defenders have had overwhelming air superiority, but summer operations frequently were hampered by bad weather. In the new season, this handicap is disappearing, facilitating the fullest employment of UN air might.

Flight operations were reported curtailed for two or three days at a time on several occasions during July, the month of heaviest rainfall. In periods of adverse weather the number of sorties flown sometimes was reduced 15 to 20 per cent. One particularly bad spell of weather early in September virtually deprived the ground forces of critically needed air support for 48 hours. Bombing runs on Pyongyang (illustration, inside cover), Wonsan, and other North Korea targets were likewise limited by soupy conditions.

Korea's seasonal weather change results from a shift in the prevailing winds. In summer the air flow is from the Pacific. It reaches land heavily laden with vapor and Korea's coastal mountains "milk" the moisture into the valleys. In the winter the winds come from arid reaches of the Asiatic continent, bringing cold, dry air masses.

Little Snow Expected

In winter the temperatures in North Korea often are much lower than in the south. The average annual temperature in the northern part of the peninsula is 38 degrees, whereas it is 58 degrees in the southern portion. Korean winter temperatures average about six degrees lower than those of the eastern seaboard of the United States from Portsmouth, New Hampshire, to Charleston, South Carolina, an area which approximates the latitude of the peninsula.

Most of Korea experiences some snow during the winter. However, precipitation is relatively light in this season. Many sections receive ten times as much moisture in July as in January, which is the driest month of the year. The dry season lasts until March or April, when the weather again begins changing to the summer monsoon.

Icing is not a serious hazard for airplanes operating over Korea in

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Poles, has been reversed through the flight or deportation of the Germans and the influx of millions of new Polish settlers. Even place names are different, with German Breslau, Bunzlau, and Kolberg, for instance, supplanted by Wroclaw, Boleslawiec, and Kolobrzeg.

NOTE: The Oder and Neisse rivers may be located on the Society's map of Europe and the Near East.

For additional information on Germany and Poland, see "Airlift to Berlin," in the *National Geographic Magazine* for May, 1949; "With Uncle Sam and John Bull in Germany," January, 1949; "Uncle Sam Bends a Twig in Germany," October, 1949; "What I Saw Across the Rhine," January, 1947; "Pedaling Through Poland," June, 1939*; and "Poland, Land of the White Eagle," April, 1932. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00; issues unmarked are available at 50¢ a copy.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, January 16, 1950; "Rumors Hint Bavaria and Austria May Merge"; "Bonn Bustles as Germany's New Capital," October 3, 1949; and "Poles Have Known 1,000 Years of Turbulence," February 3, 1947.

THOUGH WEST OF THE ODER RIVER, SZCZECIN (STETTIN) IS NOW ADMINISTERED BY POLAND

For most of its lower course, the Oder forms the boundary between the new postwar Poland and the Soviet zone of East Germany. However, the border line runs inland to include all of the important Baltic Sea port. This view is upstream. Most of the city is to the right of the river and the crowded harbor.

COLOR PICTURES FROM THE *NATIONAL GEOGRAPHIC*

Reliable aids in visual education are the many separate color pages from the National Geographic Magazine. *Subjects covered include the United States, foreign countries, and natural history. 48 sheets for 30¢ and 96 sheets for 50¢. Write for subject list and order blank.*

Bulletin No. 4, October 16, 1950

Kentucky Rifle of Frontier Enjoys Comeback

THE famed muzzle-loading Kentucky rifle, an unmatched weapon in early frontier days, is enjoying a well-deserved comeback in popular esteem.

Gun clubs and sports enthusiasts report renewed interest in the old rifle, which is again being used at target meets and in actual hunting. Marksmen interested in the sharpshooting traditions of their forebears are discovering the Kentucky's celebrated accuracy.

A Good Rifle Was Scalp Insurance

Actually this early American firearm might well have been named the "Pennsylvania." It was developed prior to 1750 by immigrant gunsmiths who settled in Lancaster County, Pennsylvania (illustration, next page). But the rifle gained its popular name through indelible association with Daniel Boone and other frontiersmen of that "dark and bloody" land, the Kentucky wilderness.

These woodsmen found the European smoothbore musket entirely inadequate for their needs. It was inaccurate, had a limited range, and made a deafening noise which frightened all game in the vicinity. Men to whom proper firearms meant dinner and scalp insurance did not care much for the musket.

So the Lancaster gunsmiths began experimenting. They cut twisting grooves in the barrel of each gun to give the ball a spinning motion, thus improving accuracy and range. They also lengthened the barrel, which reduced the noise of the gun while permitting heavier charges of black powder.

Some unknown buckskin-clad hunter was responsible for the most important refinement in the Kentucky. He made a lead pellet smaller than the bore of his rifle, wrapped it in greasy cloth, and pushed it home. The wadded covering over the bullet sealed in the barrel the explosive gases from the powder, so that the full force of the load was used to drive the ball.

Accurate at Twice the Musket's Range

Essentially, that was the Kentucky rifle. Europeans had found that rifling grooves in gun barrels were soon fouled by powder. However, the American woodsman discovered that the greased bit of cloth cleaned his gun each time it was loaded. Soon the rifle, with its "patch bullet" process, was in general use on the frontier, although the armies of the world, including those of the United States, relied largely upon the smoothbore musket until the 1840's.

With luck a soldier armed with a musket might put four out of ten shots into a man-sized target at 100 yards. But the sharpshooting woodsman with a Kentucky could drop Indians and Redcoats at 200 yards. His rifle, though handmade, was a beautifully wrought precision instrument, often richly ornamented with inlaid brass on the carved stock.

Like the plow and the ax, other tools used in winning the wilderness, Kentucky rifles were made at local forges. Sometimes the barrels were welded together piece by piece, a lengthy and laborious process. Triggers

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winter. Although the weather frequently is cold, the air is dry, particularly in the north. Cloudiness is at a minimum, with an average of 10 to 15 clear days during each of the winter months.

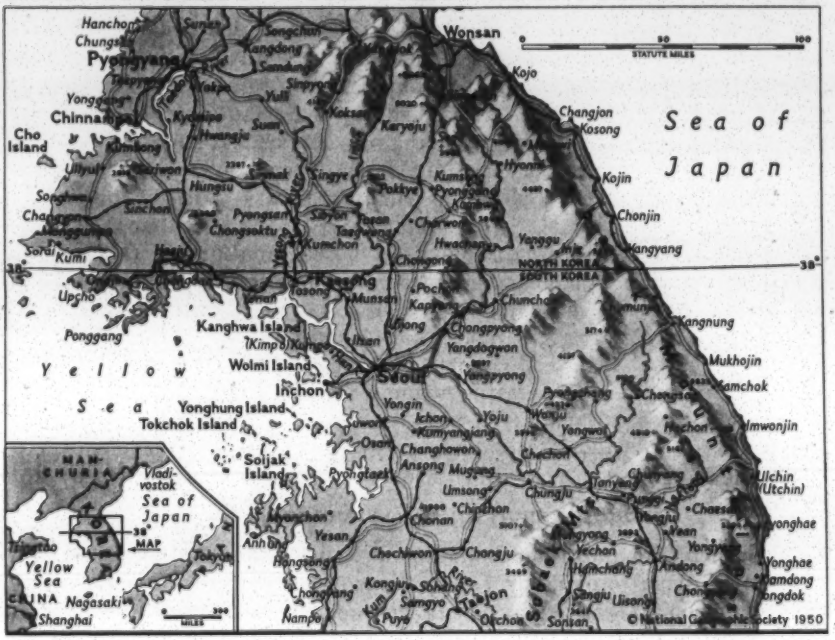
The word monsoon comes from the Arabic *mausim*, meaning a time, or a season. Thus a monsoon is a seasonal type of weather. It should not be confused with a typhoon, which is a raging storm similar to the hurricanes of the Atlantic and the cyclones of the midwest. Korea is not visited by the "great wind" as often as are the Philippines, Formosa, and Japan, but it is often threatened and sometimes hit by some of the twenty or so severe typhoons that rip through the western Pacific every year.

NOTE: Korea is shown on the Society's map of Japan and Korea.

For further information, see "Roaming Korea South of the Iron Curtain," in the *National Geographic Magazine* for June, 1950; "Operation Eclipse: 1948," March, 1949; "With the U. S. Army in Korea," June, 1947; "Jap Rule in the Hermit Kingdom," October, 1945*; and "Chosen—Land of Morning Calm," October, 1933.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 2, 1950, "War Engulfs Korea's 'Land of Morning Calm'"; and "Korea's Wait for Freedom a Restless Period," February 9, 1948.

MID-KOREA: THE NEW BATTLEGROUND



WITHIN DAYS AFTER THE INCHON LANDINGS, NEWSPAPER READERS WERE FOLLOWING THE DRAMATIC MOVEMENTS OF THE KOREAN WAR ON THIS MAP

Painstakingly prepared by the Cartographic Section of the National Geographic Society, this map was released to leading newspapers all over the United States by the Society's News Service as part of its regular activity of furnishing background geographic material to the American press. The map shows the fateful 38th parallel cutting across the center of the land and spots mid-Korea points mentioned in dispatches and communiqués. A previous map (published in the October 2 issue of the Geographic School Bulletins) showed in similar detail the area to the south.

Bulletin No. 5, October 16, 1950

Labrador Wilderness No Place for a Stroll

THE far-north Labrador wilderness of eastern Canada is so vast and surface travel so difficult that the airmen who recently parachuted from a burning plane 95 miles southwest of Goose Bay were lucky to have been rescued so quickly. The stranded United States Air Force flyers were spotted by a search plane and brought out of the nearly impassable bush by helicopter and plane.

Away from the navigable waters of the ocean and of the great fjords that reach miles inland, the only practicable method of summer travel in Labrador is by canoe. There are no permanent habitations, no railroads nor roads, and scarcely a footpath in the bleak country's interior—an area almost twice that of Illinois.

Only 5,500 Inhabitants

However, Labrador soon will have a railroad. The Labrador Mining and Exploration Company this month is starting construction on a 360-mile line to run from Seven Islands, Quebec, on the lower St. Lawrence River, north to the Burnt Creek iron-ore deposits. This field, which preliminary drilling reveals as one of the richest and biggest in the world, lies on the border between Quebec and Labrador. The rail line will play tag with the border as it winds north through the wilderness.

In addition to its Eskimos and Indians, Labrador has a distinct race of English-speaking trappers who are of basically British stock mixed generations ago with Indian, Eskimo, and some French blood. The country's 5,500 persons live in villages along tidewater. The trappers go inland to take otter, mink, fox, muskrat, weasel, and beaver. In September or October they canoe upstream to their trapping grounds. Each has his own area, handed down without title from father to son for generations. Their only haven against winter's cold is a "tilt," a rough, one-room log cabin built on the riverbank. Snowshoes help them follow their trap lines throughout the long winter.

Endless Spruce Forest Covers All

In summer these intrepid trappers rarely strike out on cross-country trips without canoes. Labrador is veined with interlocking rivers and lakes. Much area that is not actual water consists of marshy muskeg or stagnant bogs where mosquitoes and black flies breed. Caribou moss, a spongy ground growth, takes the place of soil and covers rocks with a gray-white coating. Underneath, and often outcropping, are the jumbled boulders piled up by the last glacier.

Above all rises the endless spruce forest. The scraggly, many-branched trees often grow too close together to walk among. Along shore lines and following brooks, vinous alder bushes grow into impenetrable thickets. Canoe travelers often must cut a path for themselves as they land to make camp.

Such difficulties have helped keep inland Labrador as little known as it is, in spite of the fact that the coast of Labrador was probably the

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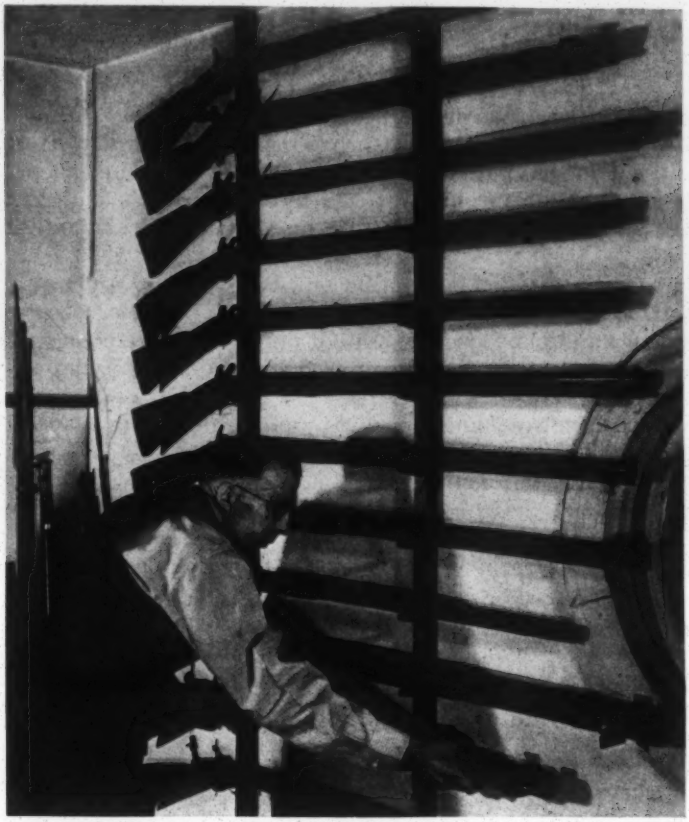
and trigger guards were beaten out on an anvil and shaped with a file. Ironworkers who learned this trade in Pennsylvania spread out over the colonies and set up gunsmith shops, often in small settlements near their frontier customers.

The early rifles employed a flintlock to ignite the powder charge. Models made after 1820 used the small sure-fire percussion caps—copper primers containing mercury fulminate. But toward the close of the Civil War breech-loading guns and metallic cartridges were introduced, ending a century of supremacy for the Kentucky rifle.

For many years the old guns were valued chiefly as keepsakes or collectors' items. Now that they have recaptured public interest, Kentucky rifles often bring high prices. And they still shoot true, though many are more than a century old.



HOWELL WALKER

KENTUCKY RIFLES COME HOME TO LANCASTER COUNTY, PENNSYLVANIA, WHERE THEY WERE BORN

A year ago the Lancaster County Historical Society unveiled, near a crumbling stone structure, a tablet which reads: "Martin Meylin (1670-1749) Gunsmith of Switzerland settled here in the Pequea Valley in 1710 and made in this gunshop the earliest known Pennsylvania or so-called Kentucky rifle. He was the first of a group of Lancaster County Riflemakers who prior to 1745 originated and gave to America that historic and colorful firearm." In this picture a Millersville, Pennsylvania, collector examines a prize rack of the long-barreled rifles.

first part of the North American mainland to be seen by European eyes. Huge waterfalls (illustration, below) and other inland scenic wonders still are seldom visited by outsiders.

Labrador belongs to Newfoundland, and together they constitute Canada's newest and easternmost province. Before 1949 Newfoundland had been a separate and distinct part of the British Empire. It has become well known to air travelers, for many transatlantic planes stop at Gander, Newfoundland, or Goose Bay, Labrador. Goose Bay's facilities include both United States and Canadian military air bases.

NOTE: Labrador is shown on the Society's map of Canada, Alaska & Greenland.

For additional information, see "Milestones in My Arctic Journeys," in the *National Geographic Magazine* for October, 1949; "Newfoundland, Canada's New Province," June, 1949; "Sea Bird Cities Off Audubon's Labrador," June, 1948; "Newfoundland, North Atlantic Rampart," July, 1941; and "The Sealing Saga of Newfoundland," July, 1939.

ROBERT F. SISSON

DEEP IN THE LABRADOR WILDERNESS, SELDOM SEEN GRAND FALLS DROP 245 FEET INTO A SEETHING CALDRON. COMMERCIAL FLIGHTS, ON RARE OCCASIONS, DETOUR TO PASS OVER THIS SPECTACLE